

Amendments to the Drawings:

The attached Replacement Sheet containing Figure 9 replaces the corresponding figure originally filed on June 15, 2001. The Replacement Sheet contain acceptable drawings in compliance with 37 C.F.R. §§ 1.84 and 1.121. A sheet labeled Annotated Marked-Up Sheet is also submitted.

Attachments: Replacement Sheet containing replacement Figure 9.

Annotated Marked-Up Sheet showing changes made to Figure 9 as filed on June 15, 2001.

REMARKS

I. AMENDMENTS TO THE DRAWINGS

Applicant submits herewith a Replacement Sheet containing Figure 9, which replaces the corresponding figure originally filed on June 15, 2001. The Replacement Sheet contains acceptable drawings in compliance with 37 C.F.R. §§ 1.84 and 1.121. Applicant has noted an error in the labels of the senses associated with the word “court”. As shown in original Figure 8, and described on page 13, lines 1–13 of the application, the senses associated with the noun part-of-speech of “court” should be law, sports, politics and politics, while none of the senses of the verb part-of-speech of “court” is assigned a theme value (represented as “NO THEME” in Figure 8). Applicant also submits herewith a sheet labeled Annotated Marked-Up Sheet, which shows the changes made to Figure 9. No new matter has been added.

Applicant respectfully requests that replacement Figure 9 be entered and made of record in the file history of the instant application.

II. CLAIM AMENDMENTS

Claims 1–23 are pending in the application. Claims 1, 11 and 21 are independent claims. Claims 1, 3, 6, 7, 11, 19, 21 and 23 have been amended. New claims 24–27 have been added. Support for new claims 24 and 25 is found in the specification on page 8, lines 4–16; page 14, lines 6–18. New claims 26 and 27 include the subject matter of originally filed claims 8 and 9, respectively, however re-written in independent form with suitable adjustments. Claims 8 and 9 have been canceled without prejudice. No new matter has been added. Upon entry of the present amendment, claims 1–27 will be pending.

The Office Action includes an objection to claims 3, 6, 7, 19, and 23 because of certain informalities. Under 35 U.S.C. § 102(b), the Office Action includes a rejection of claims 1–7, 11, 12 and 14–23 as allegedly being anticipated by U.S. Patent No. 5,930,788 issued to Wical

(hereinafter "Wical 1"), which incorporates by reference U.S. Patent No. 5,708,822 issued to Wical (hereinafter "Wical 2") and U.S. Patent No. 5,694,523 issued to Wical (hereinafter "Wical 3"). The Office Action includes a rejection of claim 10 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Wical 1, which incorporates by reference Wical 2 and Wical 3, in view of U.S. Patent No. 5,794,050 issued to Dahlgreen (hereinafter "Dahlgreen"). The Office Action includes a rejection of claim 13 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Wical 1, which incorporates by reference Wical 2 and Wical 3, in view of U.S. Patent Publication No. 2001/0029501 to Yokobori (hereinafter "Yokobori"). Finally, claims 8 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

A. THE CLAIM OBJECTIONS SHOULD BE WITHDRAWN

Claim 3 has been objected to for reciting "said step of predicting said set" instead of "said step of predicting a set." Claim 3 has been amended to recite "said step of predicting a set." Accordingly, Applicant respectfully submits that the claim objection should be withdrawn.

Claim 3 has been objected to, allegedly because "said assigned and identified themes" has antecedent issues. Claim 3 has been further amended to recite "said assigned themes and said one or more identified themes." Applicant respectfully submits that the amendment of claim 3 clarifies the claim and overcomes the claim objection.

Claim 6 has been objected to for reciting "claim 8" instead of "claim 5" to eliminate antecedent issues with respect to "said network". Claim 6 has been amended to depend from claim 5. Accordingly, Applicant respectfully submits that the objection to claim 6 should be withdrawn.

Claim 19 has been objected to, allegedly because "said eliminated sense ambiguities as a result of disambiguation" has antecedent issues. Claim 19 has been amended to recite "said

eliminated remotely probable senses and said selected highly probable senses.” Applicant respectfully submits that the amendment of claim 19 clarifies the claim and overcomes the claim objection.

Claim 23 has been objected to, allegedly because “said eliminated sense ambiguities as a result of disambiguation” has antecedent issues. Claim 23 has been amended to recite “said eliminated remotely probable senses and said selected highly probable senses.” Applicant respectfully submits that the amendment of claim 23 clarifies the claim and overcomes the claim objection.

Claims 3 and 7 have been objected to, allegedly for antecedent issues with respect to claim 1 in the alphabetic bulleting of steps. Claims 3 and 7 have been amended to delete the alphabetic bulleting of steps. Accordingly, Applicant respectfully submits that the claim objections should be withdrawn.

Claims 8 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if re-written in independent form including all of the limitations of the base claim and any intervening claims. Applicant has added new claims 26 and 27, which contain the subject matter of originally filed claims 8 and 9, respectively, however re-written in independent form with suitable adjustments, and including all of the limitations of the base claim. Accordingly, Applicant respectfully submits that the claim objections should be withdrawn.

B. THE CLAIMS ARE NOT ANTICIPATED UNDER 35 U.S.C. § 102(b)

Claims 1–7, 11, 12 and 14–23 are rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,930,788 issued to Wical (hereinafter "Wical 1"), which incorporates by reference U.S. Patent No. 5,708,822 issued to Wical (hereinafter "Wical 2") and U.S. Patent No. 5,694,523 issued to Wical (hereinafter "Wical 3"). Applicant traverses the rejection.

Independent claims 1, 11 and 21 have been amended to clarify the invention. In particular, claims 1, 11 and 21 recite that each of the sense tagged words have one or more senses, with the senses further being theme tagged. In addition, claims 1 and 11 have been amended to include language found in originally filed claim 21. Specifically, claims 1 and 11 recite reducing sense ambiguities by eliminating remotely probable senses or selecting highly probable senses of the sense tagged words based on the weighted set of one or more probable themes. Support for the claim amendments is found in the paragraph bridging pages 16 and 17 of the application. As illustrated in Figure 8 and described in the related text, senses are indicative of the meanings of the words in connection with their context in the sentence, while the themes are broader category attributed to the senses. Applicant's claims are directed to methods and apparatuses for reducing the sense ambiguities of the words in the sentence based on a weighting of probable themes. Of course, Applicant's claims are not limited to the disclosure in these exemplary sections of the application.

In rejecting independent claims 1, 11 and 21, the Office asserts that "Wical 1 teaches reducing sense ambiguities by eliminating remotely probable senses or selecting highly probable senses . . . from said weighted set of one or more probable themes." However, Applicant submits that none of Wical 1, Wical 2 or Wical 3 teach or suggest Applicant's claimed subject matter. There is no disclosure or suggestion in any of Wical 1, Wical 2 or Wical 3 of reducing sense ambiguities by eliminating remotely probable senses or selecting highly probable senses of said sense tagged words based on the weighted set of one or more probable themes. In particular, Wical 1 does not disclose a method of reducing sense ambiguities in a sentence based on thematic prediction. Rather, Wical teaches method for disambiguating the themes of a document. *See, e.g.*, Wical 1, Abstract. Wical's theme vector processor attributes a default

theme strength to the content-carrying words in a sentence. *See* Wical 1, col. 14, lines 36–46. However, Wical first determines which content-carrying words are non ambiguous, since Wical’s theme vector processor acts on only the non ambiguous content-carrying words. *See* Wical, col. 14, lines 5–23. Wical’s theme vector processor then increases or decreases the theme strength of the non ambiguous content-carrying words by analyzing the surrounding text in the sentence to determine the word’s thematic role in the sentence. *See* Wical, col. 14, lines 47–50. Furthermore, Wical’s disambiguating processing does not disambiguate a category for the ambiguous words. *See* Wical, col. 6, lines 6–11. In particular, Wical does not attempt to eliminate the sense ambiguity of the ambiguous words. Moreover, the ambiguous words are not input to the theme vector processor, and so are not weighted at all, *i.e.*, attributed a default theme strength. Therefore, Applicant respectfully submits that the present invention is not anticipated by the teachings or suggestion of any of Wical 1, Wical 2 or Wical 3, because none of the cited references teach or suggest Applicant’s invention.

Applicant also submits that the Examiner’s rejection under 35 U.S.C. § 102(b) based Wical 1, incorporating by reference Wical 2 and Wical 3, is improper. Applicant submits that such a rejection is proper only if the references are combined in a manner that reproduces a single embodiment. However, the Examiner’s proposed combination of Wical 1, Wical 2 and Wical 3 does not reproduce a single embodiment. Applicant believes that the rejection should be properly interpreted as an obviousness rejection. However, even under such an obviousness rejection, the apparatus or method resulting from the combination Wical 1, Wical 2 and Wical 3 still does not arrive at or suggest Applicant’s claimed invention, as explained above.

Withdrawal of the rejection and allowance of claims 1, 11 and 21 are respectfully requested. The remaining claims 2–7, 12, 14–20, 22 and 23 are allowable at least by virtue of

dependency. New claims 24 and 25, which depend directly or indirectly from claim 1, are similarly allowable at least by virtue of dependency.

C. THE CLAIMS ARE NOT OBVIOUS UNDER 35 U.S.C. § 103(a) OVER WICAL 1, WICAL 2 AND WICAL 3 IN VIEW OF DAHLGREN

Claim 10 is rejected under 35 U.S.C. § 103(a) as obvious over Wical 1, which incorporates by reference Wical 2 and Wical 3, in view of U.S. Patent No. 5,930,788 issued to Dahlgren (hereinafter "Dahlgren"). Applicant traverses the rejection on the basis of the claims as amended.

Applicant has previously pointed out that none of Wical 1, Wical 2 or Wical 3 teach or suggest Applicant's claimed subject matter. Applicant respectfully submits that the combination Wical 1, Wical 2 and Wical 3 with Dahlgren still does not arrive at or suggest Applicant's claimed subject matter. The Office cites Dahlgren specifically for the teaching of using reduced sense ambiguities as inputs to a natural language processing system. However, Dahlgren does not cure the deficiencies of Wical 1, Wical 2 and Wical 3. While Dahlgren discloses a system and method comprising a disambiguation module, Dahlgren does not teach or suggest reducing sense ambiguities in a sentence based on thematic prediction in the manner of Applicant's invention. Therefore, Applicant respectfully submits that the present invention is not obvious over the teachings or suggestion of any of Wical 1, Wical 2, Wical 3 or Dahlgren, whether taken singly or in combination.

Withdrawal of the rejection and allowance of claim 10 is respectfully requested.

D. THE CLAIMS ARE NOT OBVIOUS UNDER 35 U.S.C. § 103(a) OVER WICAL 1, WICAL 2 AND WICAL 3 IN VIEW OF YOKOBORI

Claim 13 is rejected under 35 U.S.C. § 103(a) as obvious over Wical 1, which incorporates by reference Wical 2 and Wical 3, in view of U.S. Patent Publication No.

2001/0029501 to Yokobori *et al.* (hereinafter "Yokobori"). Applicant traverses the rejection on the basis of the claims as amended.

Applicant respectfully submits that the combination Wical 1, Wical 2 and Wical 3 with Dahlgren does not teach or suggest Applicant's claimed subject matter. The Office cites Yokobori merely for the teaching of regularly updating a database. However, Yokobori does not teach or suggest reducing word sense ambiguities in a sentence based on thematic prediction in the manner of Applicant's invention. Therefore, the present invention is not obvious over the teachings or suggestion of any of Wical 1, Wical 2, Wical 3 or Yokobori, whether taken singly or in combination.

Withdrawal of the rejection and allowance of claim 13 is respectfully requested.


III. CONCLUSION

All of the stated grounds of objection or rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. Applicant believes that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. Prompt and favorable consideration of this response is respectfully requested.

The Examiner is invited to call the undersigned attorney if a telephone call could help resolve any remaining items.

Respectfully submitted,

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